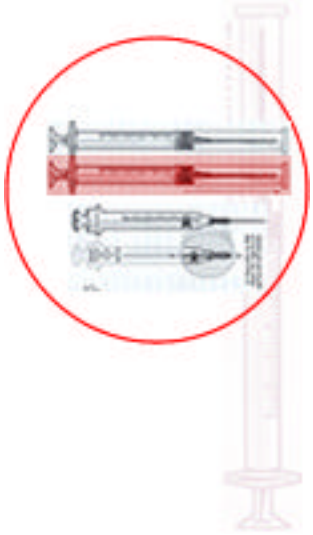
NIOSH recommends that health care facilities use safer medical devices to protect workers from needlestick and other sharps injuries. Since the passage of the Needlestick Safety and Prevention Act in 2000 and the subsequent revision of the OSHA Bloodborne Pathogen Standard, all health care facilities are required to use safer medical devices.

SAFER MEDICAL DEVICE IMPLEMENTATION IN HEALTH CARE FACILITIES

SHARING LESSONS LEARNED

NIOSH has asked a small number of health care facilities to share their experiences on how they implemented safer medical devices in their settings. These facilities have agreed to describe how each step was accomplished, and also to discuss the barriers they encountered and how they were resolved, and most importantly, lessons learned.



Phase 3: Identify and Screen Safer Medical Devices

Our full service home health agency services the inner city, suburban and rural areas. Our organization is made up of 390 culturally diverse employees, 69% providing direct patient care. We carry an average daily census of 2800 patients and provide comprehensive home health and hospice services for adult, maternal and pediatric clients.

Process used to identify devices:
The Sharps Injury Prevention Team identified specific brands of safer medical devices to be piloted in the field, using the following method.

First, the Sharps Injury Prevention Team identified **venipuncture** and **injection devices** as high priority for the agency (see "Phase 2"). The specific safer medical devices available for venipuncture and injection procedures were abundant. The entire team was involved in obtaining information about various manufacturers' products, and ultimately identifying the devices to pilot.

1. The facilitator delivered a broadcast voicemail message to the Sharps Injury Prevention Team and other field clinicians requesting names of specific venipuncture and injection devices that they preferred, if any, as well as the name of the manufacturer and order number if known. Many of the members of the team had worked with various devices and were familiar with specific brands.
2. The facilitator researched the Internet for devices. The site for National Alliance of the Primary Prevention of Sharps Injuries (NAPPSI), www.NAPPSI.ORG, contained a "Safety Device List," no photos. Another helpful site was the International Health Care Worker Safety Center at the University of Virginia, www.med.virginia.edu/medcntr/centers/epimed/products.html. This site also contains a list of safer devices with manufacturer names and telephone numbers.
3. The infusion manager provided the facilitator with brochures on safer medical devices received from a recent trade show and infusion symposium.
4. The supply manager obtained a table of safer medical devices offered from the agency's contracted supplier. The table included specific manufacturer information and a description of each device.
5. The facilitator contacted two large teaching hospitals in the city of which our agency is affiliated, and spoke with the project leader for safer devices. From these conversations, information was gathered regarding specific devices the institutions had piloted, what devices they chose and why.

Where did we obtain specific information about available devices and what did this information include?

The facilitator collected data on the devices from the above resources, as well as gathered information from sales representatives of supply vendors or manufacturers. The information included:

1. Name of product/ manufacturer/ distributor
2. Local distributor able to stock product
3. Availability of product (in quantities sufficient to meet our utilization demands.)
4. Passive/ active safety activation
5. Single-handed technique, allowing the worker's hands to remain behind the exposed sharp
6. Order/product number
7. Approximate cost of product

Lesson Learned: We would have been more organized at this point had we compiled the list on an electronic spread sheet. We would have listed our criteria for selecting the devices as well.

Without a grid or table, the facilitator extrapolated the information manually and was able to eliminate certain devices based on the criteria the team agreed upon. The facilitator then ordered samples of the devices from the distributors. A few manufacturers were willing to supply ample samples for the pilot.

Criteria we used in deciding which safer medical devices should be screened for possible pilot testing:

The team developed a list of specific criteria to determine which of the identified devices would be piloted. Our goal was to choose at least three devices to be piloted in both categories (injection and venipuncture). Venipuncture devices also included blood transfer devices. The initial criteria (step 1) included:

1. Devices were **readily available** from either our routine, contracted supplier, or from another source. Our agency does not carry an exclusive supply contract and are therefore open to other sources for supplying this equipment if necessary.

The next step included ordering a sample of the products. This was achieved by contacting sales representatives of supply vendors.

Once the products were obtained, a **second screening procedure was performed** by the Sharps Injury Prevention Team using the following criteria (step 2):

2. Criteria for desirable characteristics (as described in the NIOSH Needlestick Alert) was followed:
    - Needleless (injection and venipuncture devices are not needleless, however the blood transfer devices were examined as well)
    - Safety feature is an integral part of the device
    - Passive activation requiring no activation by the user preferred
    - Safety feature engaged with a single-handed technique
    - Activation allows the clinician's hands to remain behind the exposed sharp.
    - The user can easily tell whether the safety feature is activated.
    - The safety feature cannot be deactivated
    - Device performs reliably (and consistently)
    - Device easy to use (not cumbersome, and works quickly, narrowing the window of vulnerability of potential exposure)
    - Device safe and effective for patient care

The Sharps Injury Prevention Team members documented their findings on a screening tool developed in an electronic spreadsheet (addendum A).

The devices chosen for pilot testing met the above criteria, and were narrowed down further by:
3. Competitive pricing
4. Field clinician's requests (personal preferences)

Lessons Learned:

Overall, this process was very effective. The products eventually evaluated in the field were very comparable in quality. It helped to limit the number of devices to be pilot tested to **three** for comparable products. The time it took to evaluate the products in the field was lengthy. Proper screening minimized this time.

The Sharps Injury Prevention Team decided to use the Skills Lab at our facility where artificial arms are available to test the devices in a controlled setting. This allowed our team the ability to simulate a home environment and determine how efficient the device was in that setting.

It was apparent after the fact, we could have received free samples for some of the products that we paid for if we had only contacted the manufacturer directly. Time was an issue, and the time it took to receive free samples was lengthy in

some cases. Our local supply vendor was not efficient in providing the information needed in obtaining samples of potential safer medical products.

In home care, the product utilization is not nearly as high for these devices as in the hospital setting. The manufacturer's vendors were not as readily available for assistance in training as our affiliate hospitals. We could have explored the possibility of combining our training with a local affiliate hospital, and this may have effected our product selection.

Time Incurred

The time it took for the Agency to identify and screen is included below.

Type of Staff	Hours
Management	10.5
Administrative Assistant	4
Clinicians	1 hour total per device
Administration	30 minutes
Total	16 hours

Other, non-labor items:

Item
Computer system with Internet access
Xeroxing, paper
Safer Medical Devices
Artificial arms
Space for meetings

Addendum A

Screening Criteria for Safer Medical devices

Product	Manufacturer	Order #	Needleless	Passive	Single-hand Technique	Hands behind exposed sharp	Easy to tell safety feature activated	Cannot deactivate	Reliable	Safe/easy to use (works quickly/not cumbersome)